

Claims

1. An iterative character recognition method employing a database of predetermined character strings, the method comprising the steps of:
 - (a) receiving a digital representation of a character string;
 - (b) generating a proposed result string by applying a predetermined recognition routine to the received digital representation, the predetermined recognition routine including a recognition subroutine employing an initial parameter setting;
 - (c) determining whether the proposed result string matches any of the predetermined character strings;
 - (d) if the proposed result string does not match any of the predetermined character strings, adjusting the initial parameter setting of the recognition subroutine; and then
 - (e) repeating steps (b) and (c) to generate a next proposed result string and to determine whether the next proposed result string matches any of the predetermined character strings.
2. The method of claim 1 further including the step of repeating steps (d) and (e) until reaching a termination condition.
3. The method of claim 2 wherein the termination condition is the proposed result string matching any of the predetermined character strings.
4. The method of claim 2 wherein the termination condition is an expiration of a predetermined duration of time.
5. The method of claim 2 wherein the termination condition is a completion of a predetermined number of repetitions of steps (d) and (e).
6. The method of claim 2 wherein the predetermined recognition routine is a magnetic ink character recognition routine.
7. The method of claim 2 wherein the predetermined recognition routine is an optical character recognition routine.
8. The method of claim 7 wherein the optical character recognition routine is a multi-line optical character recognition routine.
9. The method of claim 7 wherein:
 - the optical character recognition routine is for mail processing;
 - the character string is a mailing address; and
 - the predetermined character strings are known mailing addresses.

10. The method of claim 9 wherein the recognition subroutine is chosen from a group consisting of an address block location subroutine, an image enhancement subroutine, a segmentation subroutine, a feature extraction subroutine, a character selection subroutine, a confidence subroutine, and a handwriting recognition subroutine.

11. The method of claim 10 wherein:

the recognition subroutine is the character selection subroutine;
the initial parameter setting references a first character set; and
the adjusted parameter setting references a second character set.

12. The method of claim 10 wherein:

the recognition subroutine is the address block location subroutine;
the initial parameter setting is a first Boolean value instructing whether to use a predefined address block location assumption; and
the adjusted parameter setting is a second Boolean value instructing whether to use the predefined address block location assumption.

13. The method of claim 10 wherein:

the recognition subroutine is the segmentation subroutine;
the initial parameter setting is a first Boolean value instructing whether to use a heuristic segmentation algorithm; and
the adjusted parameter setting is a second Boolean value instructing whether to use the heuristic segmentation algorithm.

14. The method of claim 1 wherein adjusting the initial parameter setting includes selecting a next parameter setting.

15. The method of claim 1 wherein the step of determining the proposed result string match includes using fuzzy logic.

16. The method of claim 1 wherein the digital representation is a digital image.

17. A method for defining an iterative character recognition routine for use in a self-orthogonal character recognition engine, the method comprising the steps of:

designating a recognition subroutine for inclusion in the recognition routine;
selecting a first parameter setting and a second parameter setting for the recognition subroutine;
securing access to a database of acceptable result strings; and

20. The character recognition engine of claim 18 wherein the database of acceptable result strings is external to the self-orthogonal character recognition engine.